Application No.: 10/807,834

Amendment and Response dated November 5, 2004

Reply to Office Action of August 10, 2004 Docket No.: 744-20 CON/RCE/CON

Page 2

In the Specification:

Please replace paragraphs [0002] and [0043] with the following rewritten paragraphs:

CROSS-REFERENCE TO RELATED APPLICATIONS

[0002] This application is a continuation of U.S. Application No. 10/459,899, filed June 12, 2003, now U.S. Patent No. 6,746,180 B2, which claims the benefit of U.S. Application No. 09/863,491, filed May 23, 2001, which issued as U.S. Patent No. 6,623,211 on September 23, 2003, and which claims the benefit of U.S. Provisional Application No. 60/206,703, filed on May 24, 2000, the contents all of which are incorporated herein by reference

In the methods of the present invention, a buffering salt is added to maintain the acidity at a neutral or near neutral pH. The transition metal is further stabilized by the binding of the chelating agent. These modifications prevents the precipitation of the transition metal as an insoluble salt and further renders the entire process more biocompatible. The bioavailable degradation products may then be further degraded by the added microbial culture or consortium or by naturally-occurring microorganisms for more extensive remediation.

Please replace the abstract of the disclosure with the following rewritten abstract:

ABSTRACT

[0094] A method of treatment of a contaminated material contaminated with an organic compound is provided. The method includes treating the contaminate with a bioremediation step followed by a chemical oxidation step. The bioremediation step method includes contacting the contaminate with a microbial consortium under conditions suitable for the consortium to mediate solubilization or biodegradation of the organic compound or reaction chemical oxidation products thereof. The subsequent chemical oxidation step includes treating the bioremediated contaminate with: a transition metal in soluble form; a chelator of the

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Page 3

transition metal, to form a transition metal:chelator complex; an oxidizing agent that provides a reactive free radical in the presence of the transition metal complex; and a buffering compound to maintain the pH in a neutral range. The reactive free radical initiates a chemical reaction with the organic compound to produce reaction products of the organic compound which can be further degraded by the added microbial consortium or by naturally occurring microorganisms for more extensive remediation.